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### Three-dimensional self-organizing map based on browsing and search of documents

#### Document Browsing and Retrieval based on 3D Self-Organizing Map

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## Abstract

This paper Kohonen self-organizing a three-dimensional map of probable and based on a list of documents, said the search mechanism. Based on this mechanism display a summary of documents and dynamic group of self-organization, offers features such as the concept can be found. In addition, self-organizing a three-dimensional map display on a mechanism to extend the excellent step-by-step visual details of the search can be vague and to support the browser user interface can be achieved. In addition to input data such as structured HTML documents can use the document, WWW-like environment can support, as well as structured documents that contain information that links groups can also apply to self-organization.

In this paper, we will describe our 3-dimensional (3D) extension of Kohonen's self-organizing map, and our document browsing / retrieval system based on the 3D self-organizing map. The proposed mechanism makes it possible to provide facilities of a summary -information generation, a dynamic self-organization, and a concept discovery for document data. The 3D extension of the self-organizing map is useful to realize a visually-effective document interface with supporting incremental 'zoom-up' and ambiguous queries. The proposed system can accept structured documents such as HTML documents as its input, and call generate a map which focuses on their hyperlink information. The system can be

easily extended to WWW environment.